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MIRACLES OF HEALING¹

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In approaching the psychological study of miracles of healing one can scarcely be expected to define the term miracle in any narrow sense, for one must study every form of the so-called miraculous from the most elemental form of naturism to the highest type of scientific or pseudo-scientific psychotherapy. The term may cover now one and now another class of phenomena as we deal with a low or a high type of belief or practice. For the purpose of this study it is even, to a large degree, immaterial whether the miraculous occurrences, or supposed occurrences, passed in review be accepted as facts or viewed as mere superstitions. We may thus, perhaps, largely escape entanglement in the discussion of a phase of the subject which has elicited a wider divergence of view, been productive of more superstition and the basis of more heresies than almost any other discussion relating to human thought. Whether based upon accepted facts or not the miracle psychosis is the result of the mind's reaction to a phenomenal world which constantly baffles satisfactory explanation. The everywhere prevalent belief in miracles of healing as facts presents problems of the origin, nature, causes, and significance of the beliefs as such. It is in short the miracle psychosis that we are most interested in. This we still have with us if we reject all the physical phenomena connected with it as untrue or as falsely interpreted.

It has become a canon among modern anthropologists that while the reactions of the human mind under the same set of circumstances may be strikingly different among different races, mental organization is in all fundamental points the same for all humanity. All are capable of abstraction, inhibition, and choice though of very different types. Two authorities on this

¹The writer wishes to express his obligation to President G. Stanley Hall for suggesting the topic of this study and for constant help while it was in preparation; to Dr. A. F. Chamberlain for frequent assistance and advice as to the literature of the anthropological phases of the subject; to Dr. E. C. Sanford, Dr. W. H. Burnham, Dr. Theodore L. Smith, Dr. Louis N. Wilson, and to many of his fellow students in Clark University for their friendly interest and other valuable assistance.

point must suffice: Brinton who says (15,¹ p. 6) that "the laws of human thought are frightfully rigid, are indeed automatic and inflexible" and that all minds deal "with nearly the same objective facts in nearly the same subjective fashion, the differences being due to local and temporal causes." (p. 9.) Again, Boas who in his discussion of the mind of primitive man says (10 b, pp. 1-11) "it would seem that, in different races, the organization of the mind is on the whole alike, and that the varieties of mind found in different races do not exceed, perhaps do not even reach, the amount of normal individual variation in each race." It is our purpose, in the first place, to show by a genetic study of the healing art that the ideas of the human race concerning disease and its cure establish this canon. In the second place, we hope, that as the study proceeds, we may discover and make somewhat more evident the laws of mind which condition its reaction to the phenomena which we study. In the third place, we shall hope to be able to show that the phenomena themselves while strikingly different when casually viewed from the outside, the real causes and effects being obscured beneath a mass of form, ceremony and superstitious or unscientific beliefs, are in reality dependent upon the action of certain now commonly recognized laws of mind, quite limited in number and of universal application. Further, we shall attempt, if these three points are well taken, to point a way to a more scientific view of the subject and to suggest some ways by which our knowledge may be made useful in the overthrow of superstition and to the positive benefiting of mankind both physically and mentally.

To the ends suggested our method is to be historical in so far as we study the development of beliefs regarding the healing art; comparative, that we may gather the common elements of the various beliefs; and psychological in attempting to discover some laws of mental life by means of which the phenomena observed may become more intelligible.

In order to determine with some degree of accuracy at what stage of his mental evolution man began to have thoughts about disease and its cure it seems necessary to sketch in brief outline the steps by which he developed, through reaction to a world full of movements, sights, and sounds, a mentality of a higher order than that of his animal ancestry.

The simplest normal human mind now to be found anywhere has its philosophy of life that, more or less crudely, attempts a solution of the great problems of fact and existence. For example, in all the history of modern anthropology no tribe of

¹The numbers in parenthesis refer to the bibliography at the end of the paper.

people however low has been discovered which has not had some sort of religion. Many attempts have been made to reconstruct the mind of our earliest progenitors and make out the stages through which have been evolved thoughts of life, magic, medicine, religion, and philosophy. Too many of these attempts have been philosophical speculations based on few and often doubtful facts. It is only since anthropologists have advanced the view, noted above, that the mental constitution of man is essentially the same in every age and under every condition, that the importance of a careful, scientific study of existing customs, mythology, language, and archeology, as an aid to the retracing of the steps of psychic evolution, has been recognized. Since the adoption of this view there have been a few scientific men and women who have put themselves in a position to form an intimate acquaintance with the facts in these fields. It is in the main upon such studies and upon the further light to be gained from the modern "child study" movement that our conceptions of the naïve thought of the race should be based. The outline which follows is based upon such authority.¹

It has been determined to the satisfaction of every competent authority that no artificial boundaries can be set up between the mind of man and that of the animal. There are stages of human thought so elemental as not to be capable of distinction from that of the animal. So nearly as we can determine, the consciousness of the animal is a nebulous, undifferentiated jumble of subject and object, of sensation and the thing sensed. According to Bogoras (10a), Clodd (20a), and many other authorities, such a state is to be found among low primitive tribes to-day. Environment and social intercourse have developed from this elemental state all the complex states of our now highly specialized consciousness. It is difficult to make out definite steps in such development, because the simplest conceptions remain and have the higher superimposed upon them. It is even possible that they develop side by side. In spite of this difficulty there is practical agreement upon some such development as we shall now trace.

The most elemental stage may be termed the *subjective* in which the objects and activities of the universe were not differentiated. The perception of motion and of the resistance to motion repeated again and again in the experience of the in-

¹For the sake of brevity and because this discussion is not sufficiently germane to the general topic in hand we shall not quote authorities on the subject, although many have been consulted, but merely refer those who wish to investigate the grounds for our statements to a few of the best references in our bibliography viz.; 10a, 15, 18, 19, 20a, 37, 38a, 52, 53, 73, 79.

dividual led to a vague idea of *life*, in its earliest form little distinguished from motion itself. In this stage there was no conception of spirit. The object was self-active. The perception of motion suggested the invisible which aroused the emotion of fear which to Hobbes and to many since his day was the "natural seed of religion." The terrors of the storm, the resistance which his will met in all the objects and beings about him, the injuries which he received when he fell upon some object or it upon him, led man to a view which differs slightly and is, possibly, an advance upon the one just mentioned. This new view is the conception, still non-spiritual, of power or powers, everywhere evidently inferred from experiences with the self-activity of objects manifested in movement and life. Gradually the life of objects as manifested in power came to be considered as a thing in itself that could be conceived of as a transfigured form distinctly different from the ordinary, material form of the object. This transfigured form was not strictly a spirit but differed from the ordinary form as the body of man differed from the object. It was in short anthropomorphic, it acted as man acted, it embodied the living self-active power of the object. This conception had been made easier by mental note having been made of gross resemblances between the parts of the object and those of the human body. Next, probably through the phenomena of dreams, ecstasy, hypnotism, intoxication, insanity, death and the like taken with the observation of the shadow of his person and the echo of his voice which were sometimes perceptible and sometimes absent, man was led to conceive of the possibility of a separation of these two forms. The one becomes now purely material; the other spiritual. The self-active element of objects is now for the first time spiritualized. No permanent separation of the two forms, however, is yet thought possible. The spirit may leave its material envelope at will, temporarily, just as it was thought that the soul of man, now for the first time conceived of, could leave the body during sleep but must always return with awaking consciousness. The final step in this line of development is taken when a permanent separation of the two forms of the object is thought possible. The spirits resident in man's body and in every object or power about him are now free either to live in their material object or person or to separate themselves forever from their material form and continue an independent existence. All of these forms of thought are still prevalent among primitive peoples and some of them persist under the influences of the highest type of civilization.

Theories of the nature, form, and later the destiny of spirit naturally followed the conception of it. Religious thought still has much to do with such questions. As one or another theory

has held the field the thought of the race has developed into fetishism, totemism, anthropomorphism, metempsychosis, polytheism, or monotheism. Some have believed in the future life; others in nirvana as the ultimate end of spirit. Some have combined various ones of these views in strange proportions. Scarcely any large group of people is wholly free from a number of the crudest of the views here outlined. It is beyond our present purpose to trace the higher lines of thought in detail.

It is impossible to say at just which stage of his thinking man began to attempt an explanation of sickness, disease, and death and to devise means for their treatment. It seems certain, however, that it came with the spiritualization of the objects and powers of the world and the conception of these spirits as capable of action for good or evil, an inference easily drawn from experience. We shall now turn to a closer study of the thought of man along this line, illustrating as fully as space will permit.

THEORIES OF DISEASE

All who have studied the medical lore of primitive and ancient civilizations agree with Hewitt (18, 21st, p. 134) and Fewkes (*ibid.* p. 15), to quote only the latter, that "primitive man regards everything as possessed of magic power allied with what we call life, capable of action for good or evil." This magic power as we have seen has been, in the animistic stage, spiritualized so that we are prepared to find with Bartels that in answer to the question, "What is sickness?" one gets, from the primitive man the ready answer that sickness is the influence of evil or ill-disposed spirits. The words in which this answer would be given might to the uninitiated confer quite a different impression, but would on careful study be found to mean nothing else. To illustrate the various ways in which this same fundamental idea would be expressed by different tribes, and even by different members of the same tribe, we can do no better than condense the exhaustive and extremely suggestive outline of Bartels. (2, pp. 49-72.) He suggests four common ways in which the evil spirit itself is the direct cause of sickness: 1. Sickness *is* a demon or it may be several demons; 2. The angry spirit of some deceased person; 3. The spirit of some animal; 4. A vampire or werewolf. In thus causing sickness the evil spirit may enter the body of its own accord; by direction of a witch or magician; by permission or at the command of the gods as a curse or punishment for wrong doing; by transfer from another person through the use of contagious magic. Again the ill-disposed spirit may make an external attack upon a person or may assume human form to

make such attack; it may steal away one's shadow, breath, life blood, or some vital organ; or by introducing into the victim's body some foreign object it may effect its evil purposes. The last of these views is very common and takes many strange forms. To enumerate only a few: disease is often caused by the presence in the body of something animate; as, a worm or other animal. Frequently the trouble is due to some inanimate body, visible or invisible, which is to be found on or in the body of the patient or the particular part affected. Within these two classes almost every conceivable object has been considered a cause. No purely physical agent, however, is ever sufficient in itself as an explanation to the primitive man. Each ailment is without exception dependent in some way upon the presence (possession) or action of some spirit.

DISEASE AND DEATH UNNATURAL

To the mind of primitive man the idea of disease and death from natural causes is almost unknown. According to Declé (64, p. 117) the natives all over Africa have no conception of death as a natural occurrence. Numerous other observers confirm this opinion. The Cherokee myth (18, 7th, p. 319) which accounts for the origin of disease and death tells us that in the olden time the animals and man lived peaceably together and disease and death were not known. As time went on, however, men increased so rapidly that they began to crowd the animals and, not only so, but with the invention of the instruments of the chase, began to kill them for their flesh and skins. In self protection the animals held a conference and retaliated by sending death and all sorts of disease upon man. The same myth also accounts for the healing art which was made possible by the plant world which was friendly to man. To defeat the purposes of the animals each plant offered itself as a remedy for some disease. So the Cherokee, even to the present time, believes that disease and death are unnatural and that there is always some plant, if we could only know it and invoke its aid, whose spirit would come and defeat the evil influences of animal spirits, ghosts, and witches. The Shaker Indians (18, 14th) of Puget Sound believe that disease came as a punishment for lacerating the bosom of mother earth. "In Egypt," says Maspero (57), "man does not die, but some one or something assassinates him." Spencer and Gillen (78, p. 476) find no belief in natural death among the Central Australians, for "however old or decrepit a man or woman may be when this takes place it is at once supposed that it has been brought about by the magic influence of some enemy." Roth's study (72) bears out the same statement for other Australian tribes. An Australian native, according to Lumholtz, "is unable to

conceive death as natural, while diseases and plagues are always ascribed to witchcraft and to hostile blacks". In short, wherever the evil spirit theory is strictly held there is no room for the conception of disease and death as natural.

EVIL SPIRIT THEORY ILLUSTRATED

The universality of the evil spirit theory may, perhaps, be made more evident by some specific illustrations. The Malay belief is that mischiefs (*i. e.* spirits) reside in all objects animate and inanimate which get into man and cause disease. The ancient Egyptians divided the body into thirty-six parts, for each of which there was a particular demon. The Babylonians attributed all diseases to demons and the Assyrians had a special one for each disease. In China, Tartary and Japan the evil spirit theory was once universal. Mooney (60) finds that the folk-medicine of Ireland assigns three causes for disease—fairies, the evil eye, and witchcraft. Roth's extensive study (72) among the Australian tribes reveals the fact that most accidents, ills, and diseases are thought to be caused by a "dooming" of the victim either by nature spirits or enemies, living or dead. The demon theory has not been entirely outgrown even in the most civilized countries of the present day although the tendency everywhere is to attribute fewer diseases to it.

The belief in witchcraft is scarcely less universal and, indeed, is only one phase of the evil spirit theory. The Egyptian physician of the olden time, as Maspero (57, p. 213) shows, was credited with all the powers of magic, sorcery, and witchcraft by which he could cause as well as cure disease having by these means the mastery over evil spirits. The sorcerer believed that if he could procure something belonging to an individual he could exercise complete control over him. A few nail parings, hairs, a piece of his clothing, or a drop of his blood embedded in a wax doll made it possible for him to inflict on the individual anything that he could inflict on the image. This is the real meaning of the removal of the scalp lock of an enemy, its possession making the soul of the owner subject to the warrior procuring it. "The illnesses to which the human race is prone," says Maspero, "were not indeed all brought about by enchanters relentlessly persecuting their enemies, but they were all attributed to the presence of an invisible being, whether specter or demon, who by some supernatural means had been made to enter the patient, or who, unbidden had by malice or necessity taken up his abode within him."

In China, Japan, India, and all those countries that came under the influence of the Buddhist religion the belief was universally held that disease was in many cases a punishment

sent by the gods for some sin committed either in the present life or in some previous state of existence. Many Chinamen will refuse to rescue a drowning man for fear of interfering with the fates ordained by the gods and thus bringing misfortune on themselves. The Greeks believed the plague a direct visitation of the gods and therefore refused to use any means to stay its ravages. Bartels (2) cites several instances in which savage peoples attribute certain diseases—notably small-pox, measles, and other epidemics—to the anger of the gods, although this belief is not so common among primitive as among civilized peoples and those especially who have come under the influence of Islam and Christianity. Here the principle is the same although the spirits are good spirits angered or ill-disposed.

The anger of an enemy or a deceased relative is responsible for many ills. The Baganda of Uganda (50: 4, p. 124) believe that the spirits of dead relatives that have not been becomingly interred haunt their living kindred and cause sickness and even death if the offence is not in some way atoned for. The natives of Australia have a similar fear of the spirits of enemies killed in battle. In New Guinea a widow must observe carefully many rules in order that the spirit of her husband may not make her sick. In many countries the spirits of still born children, or of those that die very young, of those who die of small-pox or the pest, of those dying suddenly and the like are very much to be feared for their powers of causing many kinds of disease.

The evil eye is widely feared and persons reputed to be possessed of such power are scrupulously avoided and are usually regarded as witches. Mooney (60, p. 146) states that "the belief in the evil eye is general throughout Ireland as well as throughout the greater portion of Europe and Asia," but thinks it is too subtle and intangible an idea for most savages. The idea is not lacking in the current folk-lore and superstition of this country.

The belief, common to all grades of civilization, that many diseases may be transferred, no doubt owes its origin partly to the contagion of certain diseases although it is by no means confined to these. One may for example transfer his sickness to another by placing a piece of money, food, an article of clothing, or any of his belongings on a path or in some conspicuous place where it is likely to attract attention. The first person, or even bird or animal, that touches or picks up the object is immediately afflicted with the disease and the original sufferer restored to health. The underlying thought here is clearly that of contagious magic (38a, p. 2) by means of which the evil spirit is persuaded or compelled to take up a new abode.

There are beliefs scarcely capable of classification. The Yakuts of Northern Siberia (50:4) believe that man has three shadows; if he loses one he will fall sick, while if he loses all three he pays the penalty with his life. The Tchouktchis believe (10a) that man has many souls some of which he may lose without serious trouble, but if he loses too many he becomes weak or ill. Many tribes believe that spirits of men and animals come stealthily by night and steal away a vital organ thus causing disease. The "doom" of the native Australian often means that his blood has been made bad or removed from his body by an enemy. By the same people consumption is thought to be due to the insertion by magic of a rope reaching from just below the Adam's apple down into the chest. Among the many other causes are the quartz crystals, pebbles, splinters, bones and the like which are inserted in the body by witchcraft; the magic wounds; the influence of bad winds, or water spirits, of charms, of fire, of the rainbow and other natural phenomena; the infringement of the *tabu*; and so through a list as numerous and diverse as it is possible for the minds of men to conceive. Our illustrations are necessarily limited in number and scope but are perhaps sufficient for our purpose which has been to show that everywhere the supernatural spirit theory is the prevalent theory of disease.

THE PRIMITIVE HEALING ART

Almost all observers are agreed upon the fact of the intimate relation of religion and medicine. Not only do we find among all primitive and ancient peoples a close relation in practice, but most of the accounts of the origin of the healing art are mythological and colored with religious ideas. A good example is that of the Menomini Indians (18:14th) who relate how a great "manitou" came to earth and chose a wife of the children of men. Of the four sons to which she gave birth, the first went to the spirit world when he arrived at manhood and learned all the mysteries of the "grand medicine." He then returned to earth and giving each of his family a medicine bag revealed to them the mysteries and told them to perpetuate the ceremonies into which he had initiated them, after which he departed and has since remained the intercessor with the Great Spirit. In ancient China, Japan, and Tartary we find a religion of shamanism, worshipping magical powers above all else. So, too, in Chaldea where Maspero (57, p. 780) finds that "consultations and medical treatment were religious offices, in which were involved purifications, offerings and a whole ritual of mysterious words and gestures." Among the Ojibwa, as with most other Indian tribes, the practice of magic and medi-

cine is limited to those who belong to the great medicine society into which they must be initiated by religious ceremonies comprising four degrees. For the Romans Cicero declared: "the art of medicine has been consecrated by the invention of the immortal gods." Mooney (18) finds that "among the Indians the profession of medicine and religion are inseparable. The doctor is always priest, and the priest is always doctor"—an opinion from which few would dissent, even if it had been applied to all primitive peoples.

The Medicine Man. Since man has quite generally felt his inability to cope with disease and ill fortune unaided he has ever been ready to choose as an intercessor some one who possessed greater knowledge, wisdom, and power over the unseen agencies which his fancy created. The medicine man is almost universally raised above the common people, now trusted, now feared and hated, but always exerting a tremendous influence on all phases of primitive life. It is because in him are vested both medical and priestly functions that it is so difficult to separate form, ritual, and ceremony from the healing art. He is usually at once priest, physician, sorcerer, seer, and prophet.¹ He lives a life apart from his fellows; sleeps in a tent which stands apart and differs in structure from those of the common people; as a rule he does not work, but is supported by gifts and fees from his patients; he eats different food; wears robes which designate his station, and ornaments, paints, masks and many such things as are denied the common man. In some cases his office has come to him by heredity, or it may be some mark upon his person, even some deformity, has set him apart as a fit depository of divine power. Again some strange fact about his birth; a misfortune; a dream of his or of his friends about him; some manifestation of unusual power; or the supposed entrance of the spirit of a deceased shaman into him may set forth his fitness to become a great medicine man.

Whatever may be the nature of his call, he is usually prepared for entrance into his sacred vocation by fasting, prayer, and solitude; then, by hallucination or in a dream, his guardian spirit is revealed to him and by virtue of its power he does his mighty works. In some cases nothing further is required of him in preparation for his work, but with many of our North American Indian tribes he has still to serve an apprenticeship under an older man and learn by imitation the secrets of hypnotic influence, the methods of discovering and preparing remedies, the use of the drum, rattle, medicine lodge, and other

¹ In some tribes the religious "man of mystery" is to be distinguished from the magician—healer. See 50a, Vol. XVIII, pp. 269-275; also 18, Bul. 30, under "medicine man."

insignia of the office before he can stand the examination and approbation of his fellow shamans and be initiated into the "grand medicine society" with due form and ceremony.

Among the Indians, the Australian aborigines, and some other tribes the "medicine bag" is indispensable. The shaman carefully dries some medicine, prepared with due ceremony, and puts it, with other relics, as bones, pebbles, splinters, and the like, that have been extracted from some patient, into a bag made of the skin of his totemic animal with the hair on the outside and further decorated with beads, bones, feathers, porcupine quills, etc. This he always carries with him and about it centres a vast amount of mystery and superstition.

We have spoken thus far of men as shamans, but they are not always men; in fact, in some tribes, women are considered so far superior that the man who would be a good shaman must adopt the clothing and so far as possible the characteristics of the woman. This is especially true of the Yakuts of Siberia where the most powerful and most respected shamans are women.

Some shamans have medical books and all of them have a fund of lore that recounts chiefly the names of the evil spirits that cause disease and gives formulæ for their expulsion or advises offerings, plants, and other remedies for the same purpose. When the medicine man dies we usually hear little about it, or if we do it is that his spirit has entered into some young man and lives on with, perhaps, increasing power with the new incarnation.

Diagnosis. The diagnosis of disease consists in the first place in discovering whether the sickness is due to the anger of an offended deity, a broken *tabu*, the presence of a spirit, the loss of the breath-body, shadow, kidney fat, blood, or what not; or to the presence of some foreign object introduced, by witchcraft or magic, into the patient's body. In the second place the medicine man must discover what offering will propitiate the deity or evil spirit; what charm, incantation, or good spirit will restore the lost part, or counteract the malevolent spell under which the patient is suffering; or by what means the foreign object may be extracted, or the spirit exorcised and made thenceforth harmless.

The ways in which these objects are accomplished is what most interests us. The methods to be pursued and the means to be used are almost always supernaturally discovered. In some cases a prophet advises the medicine man as to the method of procedure; in others a woman is put into the hypnotic state, or a clairvoyant or spiritualistic medium is employed to "see" the cause and report to the shaman; or he may himself, in an ecstasy or a dream, see the cause and have the remedy suggested

to him. A method which with some variations is used by nearly all our Indian tribes runs somewhat as follows: the medicine man, after a sweat bath and a stimulating drink, enters his medicine lodge where after much beating of drums and shaking of rattles, after prolonged dancing, shouting, groaning, screeching, beating of himself and invoking of his genius he works himself up into a condition favorable for the reception of the divine impulse, the spirits come and reveal to him the cause of the disease and a suitable remedy. Then, in the words of Charlevoix (18, 14th, p. 139), "full of his pretended divinity, and more like a person possessed by the devil than one inspired by Heaven, he pronounces in a positive tone of voice on the state of the patient, and sometimes guesses tolerably just."

Methods of Treatment, Exorcism, etc. If the first theory of disease was the evil spirit theory, the first reasoned treatment of it must have been entirely by magical means. The only methods admissible on such a theory are conciliation, transfer, or expulsion of the supernatural agent. The great variety of ways in which these ends were accomplished a few examples may illustrate. The shamans of the Algonquian, Ojibwa, Apache, Sioux, Sia, and other Indian tribes as well as the Malays, Australian blacks, and peoples in other parts of the world have a simple magical procedure known as the sucking method. Placing the mouth, a hollow bone, or a rope over the seat of disease they proceed to suck vigorously until the spirit, the immediate cause of disease is drawn out and disposed of in some way. The Malays (76) frequently construct a basket, which they fill with food and other offerings to attract the evil spirit. When it has accomplished this end, the basket and its occupant are set afloat on the river or taken to a desolate part of the forest and left. Others drown the spirit in a bowl of water or command it to leave the place. Among the Egyptians the disease demons were supposed to obey the gods, so when the healer was practising his art he assumed the personality of the divinity to whom the disease demon, with which he chanced to be dealing, was supposed to be especially amenable and was then ready to command the spirit as if he were the very god whom he personated. He even had the power to call to his assistance other divinities if he deemed it necessary.

Chaldea had sorcerers and exorcists who were experts in casting out, by magical means, demons and spirits which caused disease to the body they inhabited. The magician sometimes lighted a fire of herbs the clear flame of which was believed to frighten away the spirits and their evil influence. Accompanying this, to add to its effect, a prayer was offered

in which the enchantments and their expected results were described.

In China, Japan, the Malay Peninsula, and among numerous primitive as well as with more civilized peoples, prayers and ceremonies are used to induce the destroying demon to remove his baleful influence. The most common method of treatment with the Bering Strait Eskimo is the incantation of the shaman. With the Malay and some African tribes the evil spirits are propitiated by offerings, or conjured or tricked from their human habitations in various ways. In one of the cases described by Skeat (76, p. 429) the shaman mixed some pulverized woods in water with which he washed the patient's body; then with a bunch of leaves, he brushed the patient from head to foot till at last the spirit was driven out; when with his dagger the shaman succeeded, after much ado, in destroying it. The Yakuts (50:4, p. 99) apply fire to the part where the *yor* is supposed to be until the bursting of the skin apprises them of the exit of the evil spirit.

The ancient Greeks believed that disease demons were to be conciliated by lustrations, invocations, prayers, offerings, and music; and one cannot fail to note the prominent place that music, or perhaps more truthfully noise, holds in the treatment of the sick by many primitive peoples. As a rule its purpose is ostensibly to frighten or conciliate the spirit of disease.

When disease is supposed to be due to any of the causes more indirectly traceable to the influence of evil spirits, the methods of treatment are not essentially different. The sucking ceremony mentioned above is often used to extract poison, a stone, a splinter of wood or bone, or other object that has been conjured into the body. Sometimes the Malay shaman cures by rubbing the body over with a piece of dough which gathers up the object causing the trouble (76). The same people often consider breathing on the patient or on the medicine an effectual means. "The miraculous cures of the Messiah," says Burton, "were, according to the Moslems mostly performed by aspiration." (Arabian Nights V, p. 30). The folk-lore of all peoples is full of magic means of many kinds with which to combat every sort of disease. White magic can suspend the law of destiny, combat the influence of secondary deities, the evil eye, and spells cast by evil persons. Some of these magic means deserve more detailed treatment.

Amulets, Charms, Talismans, Magic Formulæ, etc. In his study of the history of medicine Berdoe (4, p. 247) comes to the conclusion that, "in the ancient world as well as with savages, the whole art of medicine was in many cases the art of preparing amulets and charms." These things either cause, prevent, or cure disease according to the method of their em-

ployment; all are based on a conception of a supernatural origin of disease; and all depend for their success, where they have any, upon their effect upon the mind of the person invoking their aid. Erdman (34, p. 353) tells us that in ancient Egypt, men and even the gods, "wore amulets as a protection, and used magical formulæ to *constrain* each other." The dead wore amulets against the evils of the next world as the living against those of the present. Certain objects were given lasting magical power by having a formula recited over them, and as of old the modern Egyptian wears amulets and written charms and puts great faith in the magical preparations of the higher theurgy. Quackery and sympathetic cures by means of amulets, magic words, laying on of hands, symbolic washings and the like were very common in ancient Greece. In Chaldea one of the infallible cures was a charm knotted with seven knots which was bound to the patient who was then sprinkled with holy water. Throughout all their history, astrology, charms, amulets, and characts enter largely into Chinese and Japanese practice. "There is scarcely a disease," says Pettegrew (68, p. 78), "for which a charm has not been given." In the early Christian centuries Gnosticism was responsible for the introduction of many wonder-working charms and amulets. Some of the old Anglo-Saxon monks made use of amulets and their countrymen have never ceased to do the same.

The most scientific men of Greece and other countries of antiquity were unable to free themselves entirely from a superstitious faith in magic formulæ. Even Galen the great Greek medical reformer and authority of the second century A. D. did homage to incantations, having been convinced against his previous conviction that "many of them are excellent severally and they reach their mark." But there were fine distinctions even in his day for he denounced Pamphilos for using incantations "not merely useless, not merely unprofessional, but all false." (4, p. 253.) Erdman (34, p. 353) states that "the belief that there were words and actions by which they could produce an effect on the powers of nature, upon every living being, upon animals, and even upon gods, was indissolubly connected with all the actions of the Egyptians." The formulæ used by the magicians were believed to be revelations from the gods themselves. They were made up wholly or in part of words from some foreign tongue or of a meaningless jargon, and the more mysterious and difficult of understanding they were the greater their power was thought to be. Written words were by many of the peoples of the olden times believed to have magic power. In Egypt even to the present time pieces of paper inscribed with texts from the Koran are swallowed and beneficial results are fully expected. In many places magic formulæ are written

on pieces of wood or slate which are then washed with water and the water used as a powerful medicine. Some of the Jews believed that Jesus had learned the Mirific WORD (true pronunciation of the word Jehovah) and by its use was able to cure diseases. The early Christian church opposed these superstitions; but so deep seated was the faith in them among her converts that the best that could be done was to substitute Christian names for heathen ones and allow their use to be continued. Peters (67, p. 163) tells us that in the folk-medicine of Germany very many cures are yet made by magic formulæ; and that in many parts of the country "*Besprechen und Stillen*" are means of healing which the inhabitants still prefer, in cases of sickness, to the help of a physician.

Use, Preparation, and Discovery of Remedies. The early use of remedies was closely connected with the spirit theory of disease. Almost all ancient and modern peoples have used certain plants as remedies; but in early times, at least, this was from no idea of their physiological effect, but because they were supposed to be distasteful to the disease demons which afflicted men. In Chaldea as in Egypt the records show that greatest reliance was placed in grotesque and revolting remedies fitted to excite disgust in the tormenting demon that caused disease. Maspero (57, p. 782) finds that although the Chaldeans were not ignorant of the natural virtues and uses of herbs, their physicians esteemed more highly prescriptions "which pandered to the popular craving for the supernatural." Even natural remedies were only made effectual by supernatural means. There were certain days for gathering each plant, definite formulæ to be recited as the plant was pulled from the ground, others as the mysterious cooking, filtering, etc., were in progress with their accompaniment of murmuring, singing, and exorcising of evil spirits that might enter and render the preparation ineffective. Again, as they were being administered to the patient, suitable formulæ and incantations recounting the effects that were attributed to and expected from their action must accompany their use. In this way the employment of natural remedies was confined largely to the physician, for only the inner circle knew the necessary formulæ and charms without which no remedy would be of any avail. This conception prevailed also with the ancient Hindu and Persian and finds its place to-day among almost all primitive peoples and to a surprising degree among many more civilized races as we shall see.

Again, there have been times in the history of almost every people when sympathetic magic measured the value of many remedies. Under this conception, some real or fancied resemblance between the remedy and the bodily organ to be

cured was the basis of evaluation. So far is this idea carried among the Cherokee that Mooney (18, 7th, p. 329) is convinced that "Cherokee medicine is an empiric development of the fetish idea." Of the plants used by them he finds that only one-third possess real medical virtue, the other two-thirds being inert, if not positively injurious. Thus we see that the doctrine of signatures had much more to do in directing to the choice of proper remedies than their actual physiological effect. This idea of "like cures like" carries us back to that stage of man's thought in which he sought out and gave special meaning to each slightest resemblance between himself and objective nature. The conservatism of human thought has preserved it, however, so that it still holds a prominent place in the folk-medicine of every race civilized or otherwise.

In this connection Bourke (13) has written in a most careful manner one of the darkest and most repulsive chapters in the history of primitive and folk-medicine. He shows that the use of all sorts of nameless remedies both current and extinct are to be traced to a religious origin. One of the best examples has to do with the Grand Lama of Tibet who is revered by his subjects as a divinity. Maltebrun asserts (13, p. 42) that "it is a certain fact that the refuse excreted from his body is collected with sacred solicitude to be employed as amulets and infallible antidotes to disease." Gilmour (p. 47) has observed that "when famous lamas die and their bodies are burnt, little white pills are reported as found among the ashes and sold for large sums to the devout as being the concentrated virtues of the man and possessing the power of insuring a happy future for him who swallows one near death."

Vambery tells of a holy Turkoman who sold as a wonder-working medicine a cup of water over which he had recited numerous sacred verses and into which he had expectorated at the end of each stanza (p. 48). In like manner we are told in the Arabian Nights (II, p. 222) how the excrement of ecclesiastical dignitaries was sold at a high price and used as a remedy for many diseases. So, too, the indestructible parts of the bodies of the Buddhas and saints are accorded curative powers by the Buddhists (p. 49). On the same principle are numerous legends (p. 57) relating to the curative properties of articles in any way connected with the body of Jesus; *e. g.*, the water in which Mary washed the infant Jesus, the touch of his swaddling clothes, the water in which his body was washed in preparation for burial, the bandage with which he was blindfolded, his blood, the crown of thorns, cross, cup, etc., are all said to have been used in healing many diseases. In both Ireland and England the water in which the chalice used by the priest at communion is washed is given to delicate chil-

dren or those having whooping cough as they are thus supposed to partake of some of the real blood of Jesus (9, p. 88).

A slightly different class of religious facts noted by Bourke (p. 97) have also much significance for the healing art. It is because of a religious conception that "the pranks and gibberish of the maniac or the idiot are solemnly treasured as outbursts of inspiration" and it was at first to the end of producing a state of religious ecstasy that the intoxicating mushroom, mistletoe, rue, ivy, mandrake, hemp, opium, and stramonium were used; but the insane talk of the mental pervert and the revelations of the religious ecstatic have often served as guides to the treatment of disease, and the natural intoxicants we have enumerated have often been used simply as medicines when their religious significance has become somewhat forgotten. For example: the mistletoe, called "all heal" by the Druids, has been used in many countries and many centuries even to the present for the cure of epilepsy, rupture, fits, sterility, for exorcism of evil spirits, and as amulets for a great number of other diseases.

It seems hardly advisable to record here the many more revolting practices connected with the healing art throughout the entire world; all the more degrading because of their close relation to religion which has always been the revealer of that which is best in man; but, deplore it as we may, the fact remains as Bourke has shown (p. 333) that "excrementitious remedies are still to be met with in the folk-medicine of various countries; indeed the problem would be to determine in what country of the world at the present day the more ignorant classes do not still use them." Indeed, in her study of the folk medicine of our own country, Mrs. Bergen finds many remedies of so offensive a character that it seems almost incredible that they "can still retain a place in even the rudest traditional pharmacopœia" except we admit that there is "in the uneducated human mind a sort of reverence for or faith in that which is in itself disagreeable or repulsive." (Pop. Sci. Mo., 33, p. 658.)

Faith in the Medicine Man. It is interesting to know what attitude the medicine man inspires in his patients. On this point some valuable data are at hand as to both ancient and modern times. Especially valuable is the testimony of those men who have made recent close studies at first hand and put themselves in a position to observe the healer at his work.¹

¹Such studies as those of Mooney (18, 7th and 14th), Hoffman (18, *ibid.*), Stevenson (18, 8th), Bourke (18, 9th), Mrs. Stevenson, Turner and Dorsey (18, 11th) in this country, Roth (72) in Australia and Sieroshevski (50, 4) in Siberia are mines of scientific data of the utmost psychological importance.

Berdoe (4) points out that in ancient Greece, the stories of miraculous cures, the many offerings and images left in the temple by grateful patients to commemorate their cures, and the divination, magic, and astrology used by the priests to discover the proper remedies, all tended to inspire in the patient the greatest hope and expectancy for his recovery and are strong evidence that "faith was the *sine qua non* in the patient." He is also convinced that although different means were employed the same attitude toward the healer was conserved among the Chaldeans.

Bourke in his study of the Apache Indians finds that their medicine men are credited with many wonderful powers. They cause rain, hail, tempests; they call up the shades of the dead and consult them; they handle serpents, swallow spear heads, arrows, fire; they locate lost property by crystal gazing; they kill and bring to life, and by many other means strengthen their hold on the people. In the same study (18, 9th, p. 473) Bourke quotes Dr. Fordyce Grinnell to the effect that "the Apache scouts seem to prefer their own medicine men when seriously ill, and believe the wierd singing and praying around the couch is more effective than the medicine dealt out by our camp 'sawbones.'"

Mooney (18, 7th, p. 323) finds that the Cherokee "has the same implicit confidence in the shaman that a child has in a more intelligent physician. The ceremonies and prayers are well calculated to inspire this feeling, and the effect thus produced upon the mind of the sick man undoubtedly reacts favorably upon his physical organization."

The Hudson Bay Eskimo is not so loyal to his own medicine men as some of our Indians, but his faith in the supernatural is no less for that reason. Turner (18, 11th, p. 270) tells us that magical cures are sometimes effected by harmless concoctions of ignorant white traders so great is their faith in such remedies. "Powders are rubbed over the seat of pain and liniments are swallowed with avidity. Strange as it may seem they often report good effects, and rarely fail to ask for more of the same kind." Hoffman (18, 14th) thinks there is no doubt but that the Menomini believe their medicine men possess great power, and he himself was unable in six years of careful observation of their ceremonies to detect imposition. Spencer and Gillen find that the central Australians have implicit faith in their medicine men (78, p. 530). Most observers are convinced of the honesty and sincerity of the great majority of the medicine men themselves (18, Bull. 30, medicine man), although there are, no doubt, some imposters among them.

THE PLACE OF MAGIC AND MIRACLE

After all this array of facts the question naturally arises: to what extent is the total practice of primitive and ancient peoples here represented? This question we shall try to answer.

In later Chaldean times there were two schools of priest-doctors: (1) those who relied on magic entirely; (2) those who taught that disease was the result of sin and that repentance was the way to cure. In time there came also to be a class of physicians who used only simple natural means. But those who used magic, charms, prayers, and incantations were still held in higher esteem and accorded greater powers. In Egypt the profession of Medicine has always been surrounded with the greatest secrecy; its practice strictly limited to the initiated; and the mysterious and magical element preserved by forbidding the laity to practice and thus become familiar with its means.

Although many of the orthodox Buddhistic teachings of the present and more recent centuries would seem to preclude the possibility of such practices as those we have found current among other races, the sacred literature of the Hindus which reaches back several thousand years reveals a large element of magic and miracle in their early healing art. Buddhistic, Brahmin, and Jainistic monks are now forbidden to use magic arts, and efforts have been made to discredit the *Atharva-veda-Samhita* and exclude it from the sacred canon. For these reasons it is of special interest as a source of knowledge of the folk medicine which grew up before the priestly religion had developed opposition to such beliefs and practices. From the *Atharva-veda* (61, Vol. XLII) itself and from Winternitz (88) we gather that in earliest times the priests of the people were at the same time magicians and sorcerers as the name Magi, applied to the ancient Atharvans, would indicate. The ancient name for the *Atharva-veda* itself has the signification of both white and black magic and its purpose as stated by the Hindus is "to conciliate (demons), to bless (friends), and to curse (enemies)." It is made up chiefly of songs and speeches for the healing of diseases. In it we find the belief in demons as the cause of disease in many of the usual ways, the belief in incubi and succubi, and in exorcism. There are formulæ for insuring long life, for purification from sin and guilt, for restoration of harmony in households and between lovers. Winternitz (88, p. 111) finds that the *Atharva-veda* has preserved for us, in its magic songs and rites, many ideas which are still current, and that it contains "numerous verses which in their character and often also in their content are as little different from the incantations of the Indian medicine men and

the Tartar shaman as from the Merseberg charms which belong to the small remnant of the oldest German poetry."

About the same may be said of the Parsees as appears from their sacred book the *Zend-Avesta*. The belief in evil spirits, demons, magic, etc., and the same sort of prayers, incantations, charms, and formal ceremonies to ward off evil or to cure disease, are to be found here as in the *Atharva-veda*. We are told (61, pp. 219, and 229) how Angra Mainyu, a helper of Ahriman, created 99,999 diseases to afflict men and how they were defeated by the 10,000 healing plants which Ahura Mazda brought down from heaven, by Airyaman's permission, for the use of Thritha a priest of the god of life and health. Here is recorded the belief in the supernatural origin of both disease and the healing art, the intimate relation of religious and magic ceremonies, and proof of the fact that originally the two were not distinguished. Whatever the later scientific developments may have introduced in the way of treatment for disease, the sacred literature of both the Hindu and the Parsee in its original purity reveals nothing that does not have in it an element of the supernatural. The healer among healers was he who healed by the holy word.

To Blümner (10, p. 238-9) "the healing processes to which the priests of the Æsculapian sanctuaries resorted seem to have occupied a very doubtful position between empirical therapeutics and superstitious hocus-pocus" and are to be "especially distinguished from those of the professional physicians by the veil of secrecy and miracle which surrounds them, since they rightly understood that the love of wonders among the common people would always bring them success." Every one is familiar with the popularity of these more miraculous methods of cure in Greek times, and with the great difficulty which medical reformers experienced in their attempts at the introduction of the scientific spirit in medicine.

The Romans had no systems of treating disease but by prayers, charms, prescriptions from the Sibylline books, and a crude domestic surgery and medicine, until they learned from the Greeks. The practice of the average physician was a combination of superstition and legerdemain.

While savage and primitive peoples undoubtedly know something of surgery and the use of materia medica, baths, massage, and the like, it cannot but be evident from what we have already said that their treatment of most diseases is largely or wholly by magic and supernatural means and that even real therapeutic means were given supernatural rather than the natural significance. We may safely say that in so far as diseases have, to them, no natural cause; in so far they have no strictly natural means for their treatment. However simple and natural the

explanation of their methods may appear to us, and however absurd the expected results of many of their procedures, we must recognize the fact that to them these things were miraculous and no result which was conceivable to them was theoretically impossible of achievement.

HEBREW MIRACLES

Old Testament Times. Little has been said so far of the Hebrew miracles of healing which have always attracted, in Christian countries, more attention than any others because of the special significance that has been attached to them. We must give them the somewhat special treatment which they deserve and trace their connection with the miracles of both earlier and later times. It is undoubtedly true that, living in the midst of a civilization permeated by the influence of magic and superstition, the Hebrews as a people were less given over to such practices than any other people of the time. The reason is to be found in the superiority of their religious ideals and the necessary modifications of primitive beliefs which their strict monotheism involved. But even here we may find many traces of primitive conceptions of disease and its cure. Indeed it is inconceivable that the Chaldean father of the race should not have retained some of the ideas so prevalent in that land from which he set out as a pilgrim. Knowing what we do of the influence of surrounding nations upon the Hebrews in other particulars all through their history it would be hard to believe that they had exercised no influence upon them in this one respect. However this may have been, we are not left wholly to conjecture in the matter for whether through the influence of surrounding nations, which seems evident in many cases, or by an indigenous growth along lines normal to every human mind there is to be found abundant evidence that among the ancient Hebrews many primitive views prevailed.

To the orthodox Hebrew disease was of penal origin and might be inflicted by Satan, or by the agency of evil spirits when permitted, or by a direct visitation from God himself as a punishment for sin either personal or parental. In several instances in the Old Testament the prophets were instrumental in bringing leprosy, blindness, and even death upon the sinful by calling down the just judgment of God upon them. Under this conception God was the only physician of his people and his blessing and forgiveness were the effectual means of cure.

But not all Hebrews were orthodox, and the Bible, the Apocrypha, the Talmud, and Hebrew tradition bear witness to the fact that as idolatry lived and flourished in the very palace of the kings so the superstition and magic of Chaldea, Assyria,

Babylonia, Egypt, and "the peoples of the land" flourished among the Hebrew populace. Whether the crude ideas of disease and its cure which prevailed among them were borrowed from these surrounding nations, or developed indigenously, is a matter of much less importance than is the fact that in no one of their conceptions did they differ materially from other ancient or primitive peoples which we have studied.

It is true that we have little positive evidence from the Old Testament as to the general practice of the people in the cases of ordinary sickness except that it was continually impressed upon them that the Lord would heal all their diseases. The provisions of the Levitical law for leprosy and kindred diseases were hygienic rather than medical; the consultation was with the priest and was preceded or accompanied by offerings and ceremonial observances. Most of the miraculous cures recorded in the Old Testament were performed through the power or intercession of the prophets. When David's child was at the point of death it was Nathan the Prophet whom he besought to save his life; when Jeroboam's son was sick he called for Ahijah the prophet; it was Elijah who raised the son of the widow of Zarephath to life; Elisha who restored the Shunammite's son; Isaiah who brought the answer to Hezekiah's prayer and directed the means for his recovery; it was Elisha's bones that restored the dead man to life; Moses's intercession which procured the cure of Miriam's leprosy; and it was the Man of God who restored Jeroboam's withered hand. As these comprise most of the miracles of the Old Testament, it is evident that here, as with most other peoples, the office of priest, prophet, seer, and physician are closely related.

There is considerable circumstantial evidence that the practices of the peoples of the land of Canaan, as well as those of other surrounding nations with which they had dealings, were quite prevalent among the Hebrews. The jealousy ordeal of Numbers 5:17 has its parallels in primitive medicine as well as in all Mohammedan countries, where we should call it magic. This drink, composed of holy water into which the priest put some dust from the floor of the sanctuary and into which he washed the curses against unfaithfulness which he had previously written on a parchment, the accused was forced to drink. This is "the bitter water which causeth the curse." If innocent the accused received no harm, while the guilty could not drink with impunity. The miraculous healing of those bitten by the "fiery serpents" by means of the brazen serpent which Moses lifted up in the wilderness, bears striking resemblance to the theory of sympathetic magic. It seems evident that Rachael and Leah (Gen. 30:14-16) knew the reputed magic power so universally attributed by primitive

peoples to the mandrake. The beneficial effect of music was recognized when Saul was troubled by the evil spirit from the Lord. The plague is represented as a destroying angel and in one case was stayed by incense which Moses and Aaron carried among the people, in another by an angel of the Lord.

The belief in all the arts of magic, witchcraft, divination, enchantments, etc., seems to have flourished all through Old Testament times in spite of the opposition which the prophets and religious leaders of the people continually waged against it.¹ Balaam, who is spoken of as a soothsayer, was certainly believed in by the Hebrews. The Moabites came to him with the "rewards of divination in their hands," but he refused and (Num. 24:1) "went not as at other times, to seek enchantments," but "saw the vision of the Almighty, falling into a trance, but having his eyes open," and declared (Num. 23:23) "surely there is no enchantment against Jacob neither is there any divination against Israel." True, Balaam was not a Hebrew, and consultations with familiar spirits were denounced, but still there seems to have been among the people a belief in these things all the while. The Levitical law "thou shalt not suffer a witch to live" is in itself evidence of the belief in witchcraft even with the law giver. Deut. 18:10-11 says: "there shall not be found among you any one that maketh his son or his daughter to pass through the fire, or that useth divination, or an observer of times, or an enchanter, or a witch, or a charmer, or a consulter with familiar spirits, or a wizard, or a necromancer," things which they were warned not to learn from the people of the land. Saul, however, found occasion to put away those with familiar spirits and the wizards, but when he himself could get answer "neither by dreams, nor by Urim, nor by prophets," he was able to find a witch at Endor. Manasseh (2. Chron. 33:6) again introduced all these practices at the very temple itself. Josiah soon after endeavored to purge the land of all such "abominations that were spied in the land of Judah and in Jerusalem," and still Ezra much later complains that "the people of Israel, and the priests, and the Levites, have not separated themselves from the people of the lands, doing according to their abominations, even of the Canaanites, the Hittites, the Perizzites, the Jebusites, the Ammonites, the Egyptians and the Amorites." (Ezra 9:1.)

Hebrew Tradition. Aside from the rather indirect evidence as to healing practices in the Old Testament and later times, the Talmud, Cabala and other traditional writings give some insight into the ideas that are believed to have been current in those days. Tradition has it that Adam, during his last illness,

¹Ezek. 8:17, Hosea 4:12, Isa. 2:6, 47:9, 12-13, Micah 5:12.

sent Eve and his son Seth to the Garden of Eden to procure some of the oil of healing which he had learned to use in the treatment of seventy-two diseases that his sin had brought upon him. Noah also figures in tradition as a man who possessed many wonderful powers among which was a knowledge of the healing art.

Coming to more distinctly Hebrew names: Abraham, the Chaldean father of the race, is credited with the discovery of astronomy, the invention of the alphabet, the knowledge of magic and other secret lore; and says Kohler, "it is related that he wore a pearl or precious stone of magic power on his neck, wherewith he healed the sick" (49, p. 87). The knowledge of this magic power, we are told in the same connection, is supposed to have been revealed to the sons of his wife Keturah. Joseph employed physicians and may be supposed to have had considerable knowledge of Egyptian medicine, as Moses, the lawgiver, undoubtedly had.

Solomon's is perhaps the greatest Hebrew name in the traditional history of medicine. Josephus (p. 593) in his account of Solomon's wisdom tells us that "God enabled him to learn that skill which expels demons . . . and he left him the mode of using exorcism by which they drive away demons so that they never return. And this method is prevalent unto this day, for I have seen a certain man of my own country, whose name was Eleasar, releasing people that were demoniacal in the presence of Vespasian . . . the manner of the cure was as follows: He put a ring that had a root, of one of those sorts mentioned by Solomon, to the nostrils of the demoniac, after which he drew the demon out through his nostrils, and when the man fell down at once, he adjured him (the demon) to return into him no more, making still mention of Solomon and reciting the incantations which he composed." The lost book "Wisdom of Solomon" is said to have been a book of magic prescriptions, formulæ, and incantations for the cure of all kinds of disease and was for centuries in great vogue among the people (17, p. 97). Another tradition states that "Solomon possessed power over demons by virtue of a talisman, which consisted of a signet ring of brass, upon which was engraved the most great name of God" (49, IV, p. 521). The Musselmans still revere him as the greatest of all physicians and no doubt many of the magical means of cure still used in the East had their place, if not their origin, in this now lost book.

The use of amulets has a history of several thousand years with the Hebrews, and it is believed that with them as with primitive peoples to-day all ornaments were originally amulets, charms or religious symbols possessing supposedly real virtues. During the Rabbinical period (first to sixth centuries) they

were used very extensively, especially by women and children, but medical men are also known to have made use of them. Those inscribed with scripture texts, names and especially the mystic name of God were most highly prized. A peculiar design of a star in a circle with numerous sacred names inscribed upon it is said to have been designed by Adam. The Creator himself was believed to have made use of such means to perform his mighty works.

Although it is very difficult to know at what time such traditions as these sprang up, and although it is impossible to say just what were the facts if any which gave them credence, they are nevertheless of some value as evidence that in quite distant times many strange practices were made use of in the treatment of disease, almost all of which seem to lend credence to the view that underlying them was the disease demon theory and a belief in magic as the effectual means of cure.

New Testament Miracles. The prophets of the old dispensation looked for a Messiah who should be the healer of His people and those who had eyes to see could not fail to recognize such an one in the person of the Great Physician. In Him we find the culmination of miraculous power. When we compare the long stretch of centuries covered by the Old Testament record, its few scattering miracles centering about a few strong personalities, with the three short years of Jesus' active work crowded full of miraculous doings, we can form some estimate of the importance and frequency of these manifestations of a great personality. In short we have here the greatest epoch in the history of the miraculous. The miracles of other peoples and even those of the prophets of Israel seem on the whole a little trifling and insignificant in comparison. While many of the conceptions of disease and its cure which prevailed under the old order of things were still prevalent at the time of Jesus, there are certain marked differences that are worth noting.

In Old Testament times, as we have seen, the traces of a belief in evil spirits as a cause of disease are few, indefinite, and of a primitive type; in the New Testament we find a perfectly developed demonology clearly stated and generally accepted. The similarity between the Persian and Chaldean demonology and that of the Jews has often been noted and many critics have attributed the likeness to influences exerted on the Jews in captivity. The trend of present day criticism, however, is to make less of the influence of outside nations and to recognize that the Jews being a people of like race and temperament with the races about them, living in a similar environment, and possessing, as we have seen, the germs of such an idea, needed only the rigor of their Judaistic monotheism to complete

the evolution of a demonology such as we find in New Testament and subsequent times. However that may have been, there is no mistaking the fact that a radical change of view has taken place and that Satan and his emissaries play an exceedingly important rôle in disease from this time on. How far Jesus shared the current views it is impossible to know but in His healing work He proceeded as though the prevailing explanation of the phenomena of demon possession were the true one. On the other hand there is no very strong proof that He ever considered disease a punishment for sin and on one occasion at least He is quoted as having clearly opposed this old Hebrew conception as contrary to the spirit of His religion.

Another feature which distinguishes the new from the old dispensation is the preponderance of miracles of healing. With the prophets and seers of the olden time cosmic miracles were more numerous than healing miracles. In New Testament times the reverse is true. Taking as a basis the number of occasions on which Jesus exercised miracle working power we find that more than 72 per cent. of them were of healing. If we take into account the many expressions such as: He healed "all that were sick", "all that were diseased", "them that were possessed with demons", "them that had need of healing", "many", "multitudes", "all manner of diseases", and others of like import the relative number of cosmic miracles accredited to Jesus sinks into comparative insignificance. His statement to the disciples that by faith they might remove mountains may be taken as evidencing His belief in their ability to perform cosmic miracles, but so far as we are informed only a few of them ever performed even miracles of healing.

Both Jesus and some of His disciples are said to have cured all manner of disease, and so far as the record goes Jesus never failed in any attempt to cure although the disciples did in at least one case. Among the recorded cures of Jesus where details are given the common diseases rank as to numbers cured in the following order: leprosy, demon possession, blindness with several others in about equal numbers. In the general statements the writers speak of the sick, diseased, tormented, possessed with demons, lunatic, palsied, leprous, blind, deaf, dumb, lame, maimed, halt, and those afflicted with the plague as having been cured and the dead raised to life by the Great Physician.

The methods used by all the miracle workers of the New Testament were not radically different from those with which we have already become familiar among other peoples. There was no hesitancy in making use of such traditional means as

saliva, the touch of the hand of the wonder worker, baths; the Levitical regulations were observed in the healing of lepers; Peter's shadow cured any sick upon which it chanced to fall; handkerchiefs or aprons rendered potent by contact with the body of Paul cured diseases and expelled demons (Acts 19:12); the WORD of power was used by all. Exorcism, here as with all other peoples of antiquity, was the almost universal means for the casting out of evil spirits. As in Moses's time it was admitted that the difference between the wonders of the Egyptian magicians and those performed by the Lord through Moses was only one of degree, demonstrating the greater power of the true God, so Jesus seems to have believed that others were able to use the power of exorcism. To the Pharisees He said: (Math. 12:27) "If I by Beelzebub cast out devils, by whom do your children cast them out?" At another time He rebuked the disciples for forbidding one who followed not with them to cast out evil spirits in His name. The almost universal requirement which was insisted upon as a condition of cure was the faith of the patient. Where this was weak He strengthened it and on at least one occasion He intimated that He would not, or perhaps could not, do anything without it. Unbelievers were sometimes excluded, certain traditional methods were used, in every way the patient was stimulated to do all he could for himself, and it should be noted that whether purposely or not the laws of mental medicine as we now know them were conformed to in almost every detail. For a detailed development of this point one may consult Hudson (44).

Some modern critics make much of the genetic order of Jesus' miracles, seeking thereby to show that not only did His own feeling of His power grow by exercise, but that the miracles which He performed make increasing demands upon our faith. So, too, they maintain that the publicity with which He did His work increases as His ministry advances. In His earlier miracles they find that the initiative was usually taken by the patient, whereas later from pity and a sense of duty He often relieved those who had not sought His aid. The nature of the records, their meagreness and the conditions under which they were written make it difficult to maintain this point satisfactorily, and if it were true that the miracles manifested increasing power it might be accounted for by the increasing faith of the people as they became more acquainted with His work. The genetic view is not an unreasonable one, however, and in a psychological study of the life of Jesus it yields some very helpful conceptions. It is beyond our purpose to pursue such a discussion in detail.

The fact of most significance for our study is the great power of personality manifested in Jesus. Even the extremists in

criticism admit that no life has ever had crowded into three brief years such an amount of wise teaching, deep insight into life, and such manifestations of the power of personality as this life. It is no disparagement whatever to this life that the mighty works which were done in it do not differ radically from those of other great minds. It is enough to know that in it were revealed depths of insight into the great fundamental laws of life the significance of which we have scarcely glimpsed as yet. Compared with the therapeutic methods of His time, His methods were simplicity itself. They were, in short, psychic and were based on an understanding of the ultimate relation between mind and body such as that toward which medical science is now more and more tending. The miracle workers among His followers were Peter and Paul, the two strongest personalities of apostolic times and the two men who understood most fully the import of Jesus' life and teaching.

CHRISTIAN MIRACLES OF HEALING

Such eminent Jewish authorities as Kohler, Broydè, Blau¹ and others are of the opinion that the Essenes a Jewish order of monks who pretended to exercise great miraculous powers through the magic spell of the Holy Name, were in a sense the predecessors of the Christian miracle workers and did much to prepare an atmosphere favorable to the acceptance of the wonder working power of the name of Jesus as used by the apostles. They also maintain that rabbinical literature made less of the miraculous than did the literature and practice of early Christianity, and that cures by exorcism and other miraculous means were most common in Judeo-Christian circles. The belief in such powers they consider a common characteristic of both pagan and Jew at the beginning of the Christian era.

During apostolic times miraculous powers were in evidence but became less prevalent at the close of this period. Beginning with the second century the rôle of the miraculous again becomes important and continues to be increasingly so till recent times. In many quarters even an extreme belief in the miraculous is still maintained as a true tenet of Christian faith historically established and not to be altered in any particular by the findings of present day science.

Brewer (16) has summed up in his recent "Dictionary of Miracles" some valuable and interesting data concerning the miracles of Roman Catholic saints. Beginning soon after apostolic times there are records of the miraculous powers of the saints in ever increasing numbers. At first these miracles

¹ For the opinion of these scholars see "The Jewish Encyclopedia," (49) vol. iv, p. 519; v, p. 230 and 306; viii, p. 607.

were wrought by the saint in person but later the same powers were credited to their relics, tombs, and shrines. The hagiography of the church teems with the miraculous all through the middle ages. There are several notable saints any one of whom, if we are to believe the record, performed miracles the briefest record of which would fill a good sized volume.

In all of these miracles there is a close resemblance to the Bible records, the example of Jesus and His early disciples being followed both as regards methods and language employed. The demands made upon our credulity are, however, so much greater than those of the Bible records that this in itself discredits many of the accounts. For example the fact that raising of the dead is one of the most common of miracles and the fact that bodies that had been completely dismembered are said to have been restored, that still born children and even roast pullets, partridges and the like could be restored to life tends to discredit the whole record of the miraculous during the middle ages. The same diseases are spoken of as those already mentioned in the preceding section.

From the fourth century on the sign of the cross became one of the most potent means of effecting cures. It was and still is regarded as a charm usually sufficient in itself to cure, but many times its use is accompanied by prayer, the name of Jesus, holy water or oil, a kiss or touch and the like. Beginning about the sixth century the crucifix was used in the same way.

A few illustrations of methods used by the saints must suffice to show how closely these were copied from Bible accounts. In raising the dead the saints either stretched themselves upon the body as did Elijah or taking the person by the hand called him by name or commanded him to arise. The use of saliva or holy water was the common means of restoring sight; pilgrimages to the tombs of dead saints were the resort of cripples; exorcism was the usual procedure in casting out demons; touch in the cure of king's evil. Some originality may be granted to the saint who exorcised a demon by drawing its picture and then burning it. The mere sight of a saint caused one demon to flee from the ear of the possessed in the shape of a mouse. Profession of faith and baptism were frequent means of cure for disease. Exorcism was long a part of the formula of baptism in the Catholic church as well as the use of saliva (16, p. 295). St. Francis (1416-1507) we are told used saliva and the sign of the cross in a remarkable miracle performed on a child born without eyes or mouth. The record says: (16, p. 232) "St. Francis marked with his spittle the place where these features ought to have been, and then making the sign of the cross the infant became possessed of two

brilliant eyes and a model mouth." Several of the saints are said to have stayed the plague, and Pope Leo IX (16, p. 264) gave wine in which relics had been steeped to those who were afflicted and it is said that "all who drank in faith recovered" although we are not told how many were thus cured. As has already been stated the plague was regarded by many besides the Christians as a stroke of divine displeasure, but Procopius's description of it shows so well the immediate agency believed by people of his time to be its cause that I must quote. He says: (16, p. 438) "the manner of attack was this: visions of spirits in all sorts of human shapes were seen, and these spirits struck with a blow the victim who was forthwith taken ill. At first men tried to turn away the demons by uttering holy names and hallowing themselves as best they could; but they gained nothing by so doing . . . not a few saw the phantom demon in their dreams at night; it stood over them and struck them, and they were numbered among the dead."

The belief in demon posession, as we shall see, has not died out, but during the middle ages and early renaissance centuries it played a much more important rôle than now. Some things in regard to the treatment of such cases have already been noted, but the following quotation from a book entitled "A Club for Exorcising Demoniacs," written by Mengus in 1600, throws so much light on the methods of that time that we cannot afford to omit it. "If after mass has been signed with five crosses, sprinkled with holy water, and there have been invoked over her (the possessed) the name of the Father, Sonne, and Holy Ghost, the devill still shews himselfe refractarie, and will neither depart, nor tell his name,—then you must come upon him with as many nicknames as you can possibly devise, and thou shalt say: 'Heare thou sencelesse, false, and lewd spirit, maister of devills, miserable creature, defrauder of souls, captaine of heretiques, father of lyes, bestial ninnie, drunkard, infernal thiefe, wicked serpent, ravening wolfe, leane hungerbitten son, seely beast, truculent beast, cruell beast, bloody beast, beast of all beasts most bestiall, Acherontall spirit, smoakie spirit, Tartareous spirit, and so on, I command thee to tell me thy name, and to depart hence into thyne own place' " (16, p. 103). As will readily be seen, these directions combine several of the most potent means known to the Christian exorcist of the dark ages: the mass, sign of the cross, holy water, the use of holy names, knowledge of the demon's name, and abusive language. All these means, singly and together, were many times used and it seems quite probable that their effectiveness was thought to follow about the order in which they are here mentioned.

King's Evil. In this connection some mention must be made

of the miracles performed by the French and English kings. The early development of the idea that by a sort of divine right the power to cure scrofula, or as it was at that time called, "King's Evil", was conferred upon the sovereign it is impossible now to trace. It seems certain (16, p. 306) that the French kings enjoyed the privilege long before those of England, and tradition says that it was first a gift to Clovis at his baptism in 496 A. D. Another persistent legend is that it was bestowed as a gift by St. Marcone in the sixth century. However this may be, we find that many of the early French kings made pilgrimages to Corbeny, where the body of this saint reposed, in order to have his skull placed reverently in their hands by the monks. On the day following this ceremony they were ready to banish with a touch that disease, "*pour la guérison desquels Dieu a accordé aux rois de France une grace singulière.*" Most of the French kings used the sign of the cross saying at the same time "*Le roi te touche, Dieu te guérit.*" This divine prerogative was exercised by the French kings from the time of Louis le Gros (1108-1137) with few exceptions until 1825 when Charles X effected many cures. Some were deprived of the right, it is said, because of evil life, but rather out of harmony with this is the fact that some of the most notoriously immoral of the kings exercised it with success. Phillippe VI (1328-1350) is said to have cured 14,000; Louis XII (1498-1515) "reconciled himself to God seven times a year by confession" and after each confession touched any one who had need of healing; Henry IV (1589-1610) touched and healed above 15,000 persons a year, according to the king's physician.

In England the first cures are accorded to Edward the Confessor who, it is thought, may have learned the practice from his French contemporaries. His method was his own. Brewer finds that "the king sent for a basin of water and dipping his fingers therein he frequently touched the parts affected every now and then forming with the tip of his finger the mark of the cross. The persons to be touched were selected by the king's surgeon and the number went on increasing every year." (p. 306). Edward I gave a gold or silver touch piece to those he cured; Elizabeth discontinued the use of the sign of the cross for fifteen years; Charles II is said to have touched 100,000 persons on his accession and more than 4,000 yearly and yet "in his reign more died of scrofula than in any other;" Anne touched some 200 in 1714 among whom was the distinguished Samuel Johnson; George I discontinued the practice in 1714 but the formula for "The office of touching" did not disappear from the "Common Prayer Book" until 1719 and pretenders continued to practise it as late as 1745. Black (9, p. 43) tells

us that "In 1838, failing the royal touch, a few crowns and half-crowns bearing the effigy of Charles I were still used in the Shetland Islands as remedies for the evil."

DEMONOLOGY

The subject of demonology is a study in itself, but its prominence in the miracles of healing in biblical times and since, make it necessary to note the evolution of the idea very briefly. There can be little doubt that the demonology of the early Hebrew period was a development from some simple form such as those we have found among the primitive races. From a conception of spirits devoid of moral character, good and bad spirits came to be differentiated. From the classes of good and evil spirits it was possible in time to derive the ideas of gods and devils which came much later in history, by a gradual subsumption of the powers of all the good spirits under one supreme spirit to get the idea of the God of monotheism, and by a similar process the idea of monodemonism with its arch fiend, the Devil or Satan, under whose dominion all the evil spirits of the universe live and act. Much of this evolution had been accomplished before Jewish times and it must be regarded as the necessary accompaniment of a rigorous monotheism. It is possible to note within the sacred record itself the evolution of the Satan idea in proportion as the evils of life were attributed less and less to God's judgments until finally they are laid almost wholly at the door of Satan and his emissaries.

The belief in the miraculous had not a little to do in this evolution. As we have shown, miraculous events were, as now, by no means confined to the chosen people, but in accounting for the wonders worked by others it was common to say "the gods of the heathen are devils," thus attributing their success to Satanic rather than divine power. Thus from very early times the misfortunes, diseases, and pains of the devout have been attributed to the agency of the Evil One, but at the beginning of the Christian era and from that time on a certain sort of mental disease known as "demonic possession" has been especially attributed to Satanic influence. It is this class that interests us most, not only because of its prominence in the miraculous cures of all the Christian centuries, but particularly because of the psychological phenomena it presents.

Demonic Possession in China. Perhaps no better illustration of what "demonic possession" is and always has been, is to be found than the cases of this phenomenon that may be observed in China to-day. In a recent book (65) Dr. Nevins describes in detail many cases which resemble in almost every particular those described in the New Testament, and maintains that they are inexplicable except as the actual influence of evil spirits.

He cites other modern observers in India, Japan, and Europe who have observed the same phenomena. Bishop Calloway and Brough Smith have seen many cases, in Natal and Australia respectively. (15, p. 52.)

Although the attendant phenomena vary widely there is a general similarity among all races. Some of those affected are wild and unmanageable, leap, and toss their arms about; others are more calm; some entirely unconscious while visibly possessed. The personal appearance is nearly always changed; in some there is palpitation, peculiar contractions, foaming. In nearly every case a second personality appears which personates a god, genii, the spirit of a deceased relative, or some animal. The first symptoms of the disease often occur in dreams and many times a fit of anger or grief is the first sign.

In most cases the "demon" comes in spite of the most violent opposition on the part of the person, but there are those who voluntarily invoke the spirit's presence in order through its power to make revelations by clairvoyance, clairaudience, or by a Chinese variety of planchette. Numerous other powers are claimed for the possessed such as speaking with tongues or in poetic form, singing, when otherwise they could not, and evidencing unusual physical strength. In some cases they are very destructive; they rob, steal, curse food and wells, put filth in eatables, and cause the money of the household to disappear; while if they are worshipped and propitiated all evil manifestations disappear and the family receive unusual favors instead.

The Chinese system of treating possession is in accord with their beliefs regarding it. A priest is called in who makes use of one or several of the following means: sacrifice, chants from the sacred books, prayer, offerings of money, begging or exorcism, magic spells, incantations; or by pinching, sticking with needles, by the use of peach or willow branches, charmed water and other similar means he drives out the spirit and confines it. If the priest-doctor fails they resort to spiritism and all its attendant phenomena of rappings, table tipping, planchette writing; and revelations of suitable charms or remedies to be used are as familiar to them as to our spirit mediums and our Indian medicine men. Confucianists, Taoists and Buddhists alike make use of such means. Of recent years Christian converts have been most successful in casting out these spirits by prayer and in the name of Jesus. In many cases a profession of faith is said to have been sufficient to relieve the sufferer of all further trouble. Space forbids the quoting of any of the numerous detailed descriptions of individual cases given by Nevins, interesting as they are as data for a study of comparative psychology and pathology. But one may say that

almost every phase of the so-called "demon" possession of China, as it appears in the descriptions of Dr. Nevins, can be paralleled in any large institution for the insane. Any one who has had experience even in clinical demonstrations with such patients must at once admit the similarity. The periodic recurrence of attacks, the phenomena of double personality, sudden outbreaks of mania and as sudden returns to apparent normality, changes in voice, peculiar losses of control over the natural movements, or variations by habit or fixed ideas of functions naturally reflex, as breathing, etc., peculiar claims to and even real possession of unusual powers,—all these and many more of the manifestations we find repeated in every insane hospital. The differences are practically nil except those due to religious beliefs, superstitions, and race characteristics shown equally well in normal individuals. A more careful study of demonology in a comparative way by men of anthropological and psychological training will no doubt make a valuable contribution to our knowledge of the human mind and its variation under environment, education, and the influence of dominating religious and superstitious ideas, but there can be no question that it will be termed simple insanity.

SOME MODERN MIRACLES

St. Anne de Beaupré. For a modern illustration of the class of miracles performed during the middle ages one need not even cross the Atlantic. Not far from the city of Quebec there stands to-day a shrine at which we are told may be seen evidences of the miraculous almost any time. Long ago a few Breton sailors who believed themselves lost in a storm vowed to St. Anne that if she would deliver them they would build a chapel at the spot at which their boat touched land. They were saved, and true to their promise built a modest wooden chapel. In 1660 the chapel was rebuilt on another site and again in 1787. The foundation of the present structure was laid in 1872, and was completed in 1876 at a cost of nearly \$200,000. About the year 1670 a relic of the saint was brought from the chapter of Carcassonne. We are told (*Cath. W.* 36 p. 87) that: "this relic is in fact a portion of the saint's finger and is vouched for by the cathedral chapter of Carcassonne, by Mgr. de Laval," etc. In 1877 another relic was brought from Rome, many valuable gifts were sent by patrons from various countries, some of whom belong to the royalty of France and Austria, and the shrine became so famous that on May 7, 1876, Pope Pius IX declared St. Anne patroness of the province of Quebec. Relics of other saints are also now to be found there and (*op. cit.*, p. 88) "the walls and sanctuary are fairly covered

with crutches, hearts of gold and silver, and the like, each one telling of a belief in some cure obtained, or petition heard."

The popularity of this shrine does not seem to grow less but rather greater as the years pass. Pilgrimages are made at all times of the year and during the summer months the sick and those who have been cured come by trainloads to be cured or to render thanks for favors already received as the case may be, and the ancient prayer "*Sainte Anne, Mère de la Vierge-Marie, priez pour nous*" is on every tongue. The records for the year ending Oct., 1903, show that during the year some 168,000 pilgrims visited Beaupré, 1,250 of them coming from various parts of the United States. A study of several copies of the "*Annales de la Bonne Sainte Anne de Beaupré*" has furnished some information as to this interesting chapel as it is now. This monthly publication given up to recording the miraculous cures which take place at the shrine and elsewhere through the help of St. Anne, and to some other matters of a more general nature, offers to its subscribers participation in the merits of the prayers, masses, communions, mortifications, works, and occupations of the fathers Redemptoristes of St. Anne de Beaupré, keepers of the venerable Sanctuary.

In the "*Annales*" we find recorded each month from one hundred and fifty to two hundred or more cures besides numerous material favors such as employment, protection on journeys, conversions and other spiritual and temporal blessings. Some are recorded with some detail so that it is possible to form an idea of the general nature of the cures here effected as well as the means used to this end. Among the most common means used are prayers to St. Anne, at the shrine if possible but often at the suppliant's home; pilgrimages to the shrine; promises to publish the fact of cure in the "*Annales*"; promise to subscribe for the same; the use of medals of St. Anne as a charm; promises to break bad habits; application of an image of St. Anne or of holy oil brought from the shrine of Beaupré.

As an illustration of the nature of the cures effected and the unbounded faith of the petitioners we have selected a few of the more detailed cases from the January and February numbers of the "*Annales*" for 1904 which we present in translation from the French.

1. "Since January, 1902, I have suffered with a polypus of the nose and an ulcer of the jaw bone. I had submitted to two operations which have improved my condition without curing me. I continued to suffer. In July last I decided to put myself under the protection of the good St. Anne promising her to publish my cure. That moment there came about a sensible improvement. To-day I believe myself entirely cured and I thank my heavenly protectress for it."

2. "My little girl of two and one-half years had never walked. She was desperately weak. I commenced to pray to the good St.

Anne promising her to publish the fact in the "*Annales*" if she would make my child walk, and to subscribe for it the following year. Her grandmother made a pilgrimage to Beaupré and on her return she put a medallion of St. Anne around the neck of the child saying to her "a gift, you must walk". At the same instant the child, smiling, began to walk with a firm step. I am so happy that I do not know how to express my thanks."

3. "My husband was worn out with an affliction of mind which was about to impair his reason. The good St. Anne, invoked with confidence, has returned to him his serenity."

4. "For five years I have endured terrible suffering. Finally, I promised to make secretly the pilgrimage to Beaupré. The good St. Anne has given me enough strength to acquit myself of my promise. Since my return I have been very well. Thanks Oh Good Mother!"

5. "Last spring I had a grave sickness which brought me to the gates of death and which baffled the science of our regular physicians. I received the last rites and every one believed that I was going to die. My family commenced a "*neuvaine*" to the good St. Anne and to the blessed Gerard Majella. Heaven has yielded. I am cured of the disease which was about to take my life. It only remains that I make my acknowledgment and publish this favor according to the promise I had made."

6. "For ten years my wife suffered from a painful infirmity. I promised St. Anne that if she would cure her I would abstain from all intoxicating drinks. To-day I am happy and publicly thank the good St. Anne, first for the complete cure of my wife obtained in a few days after my promise, then for having given me grace to keep faithfully my temperance promise."

7. "I am happy to announce to you that at present I walk easily without the aid of my cane. After my return from the sanctuary of St. Anne de Beaupré during the summer, I have been able to go to mass for the first time in four years. I have made already four pilgrimages to the sanctuary of St. Anne and I propose to make a fifth as an act of gratitude and to carry my cane in order to lay it at the feet of our benevolent patroness. Praying you to join me in thanking the good St. Anne," etc.

In just how far the very primitive conceptions of disease are prevalent among the devotees who visit the shrine of St. Anne it would be difficult to say. But whether or not the primitive view of the cause is prevalent, the idea of supernatural means of cure certainly varies little from that prevalent in all ages and is evidence of the persistence of a method of procedure long after the idea which gave it origin has been more or less discredited.

Shakerism. A recent historical sketch of the society originally called the "Shaking Quakers" presents some facts which are of interest to our study. This society was formed in 1747 near Manchester, England. It's most famous member was Ann Lee (Stanley) more familiarly known as "Mother Ann." She was born at Manchester in 1736. Her biographers say that (89, p. 15) "as a child Ann was serious and thoughtful, subject to strong religious impressions and given to reverie and visions." Her child life was not that of the freedom and

happiness normal to childhood, but, on the contrary, she lived a life apart and gave herself over to extreme and exaggerated religious experiences.

She early felt a strong aversion to marriage, but the customs of her time required her to marry against her wishes. She became a member of the Shaker society in 1758 when 22 years of age. She seemed to feel laid upon her the sins of the whole world, and repeatedly, through a period of nine years, there were times when she would spend her days at work and her nights at prayer until her body wasted away and perspiration as drops of blood pressed through her skin. It was at such extremities that her "visions" and "revelations" came. Some of these "revelations" have become a part of the doctrine of the Society. Those most fundamental and characteristic are: 1. The duality of Deity, God both Father and Mother; one in essence . . . two natures co-equal in Deity. 2. The secret of man's sin, the cause of his fall is the premature and self-indulgent use of the sexual function.

She felt that it was necessary that the Christ Spirit should come again in the form of woman to complete the revelation of God to humanity and she was the woman, anointed as she believed by the hand of Jesus himself, the second visible Head, in whom dwelt the Divine Mother. Very naturally, then, we should expect to hear that "about this humble, unlettered woman centered some of the most remarkable spiritual phenomena the world has seen . . . electric streams from Deity using her as a transmitter of spiritual force." (89, p. 15.)

According to their own claims Shakerism is the parent of modern spiritualism. At any rate spirit manifestations, prophetic utterances, phenomenal occurrences, revelations, and miraculous healings have been common throughout their history. Quoting again from "Mother Ann's" biographers (89, p. 353): "Numerous instances are certified to, by those who personally knew 'Mother Ann' and the Elders, where a word or a touch from her or from them had released from suffering, cured disease and restored health and strength . . . among them are cases of lameness, hip disease, consumption, acute dyspepsia and stomach troubles, exhaustion, obsession, dislocation of bones, glandular affections and many more."

There seems to be little or nothing here to distinguish the cures mentioned from those of other forms of faith cure. We have dwelt thus fully upon this movement only because it is somewhat less well known than many of the modern movements of this nature; because it bears some theological resemblances to Christian Science and is said to have furnished some of its doctrines; and because it furnishes one more illustration of the

sort of religious expression that accompanies many of our modern mental healing cults.

CURRENT SURVIVALS OF OLD SUPERSTITIONS

We have noted somewhat in detail the elements of the miraculous in primitive medicine and have seen how, as the race becomes more civilized the form in which these elements appear changes from extremely crude to more refined and intellectual types. With the beginning of the scientific age many of the superstitions of primitive life were shattered; but the human mind by no means disconcerted by this fact simply adjusted itself to the situation by the invention of new means for the exercise of its faculty of credulity, or continued to hold its former beliefs in spite of contradictions. While modern scientific thought has dislodged much of the old primitive thought, students of anthropology and folk-lore in recent years have revealed to us some startling facts regarding the persistence of such beliefs. Even in the midst of highly civilized communities, in our own country for example, are still to be found many of the superstitions of primitive peoples, not merely treasured up in memory as tales of a past generation, but used and believed in as sincerely and thoroughly as at any previous age.

The fact that medical science makes use of many plant and mineral substances, and surrounds their use with a measure of secrecy and mystery, has perhaps contributed to the retention of very much of the plant lore that has been accumulating for centuries. Such men as Folkard (36) and Dyer (27), and in America Mrs. Bergen (6), have gathered and put into accessible form the immense folk-lore of plants. The former mentions the names of no less than 1,400 plants that have been in many ages endowed with remarkable powers as charms, amulets, counter charms, means of divination, etc. As medicines the virtues of many have been extolled far beyond and often even in direct opposition to their known qualities. These same superstitions are all about us in a more or less definite form as is shown by Mrs. Bergen's (5) studies in the current folk-lore of America in which one finds such statements as the following: "In a town fifteen miles from Boston, the teacher has advised the pupils to wear nutmegs about the neck to prevent cold sores. Feb., 1892" (p. 100). The same remedy was employed for the two-year-old daughter of a New Hampshire legislator in 1893. In Maryland the belief has some currency that "biliousness may be cured by boring three holes in a carefully selected tree, and walking three times around it, saying 'Go away bilious!'" (5)

The same facts with regard to animal lore have been found

by Jühling (51) in Germany and Mrs. Bergen (6) in our own country. The former mentions no less than 115 species and varieties of animals made use of in German folk-medicine alone and records the methods of employing their flesh, blood, etc., in actual practice at the present time. Many of these accounts present a picture dark indeed to one unaccustomed to noting the things upon which common humanity places its reliance in time of dire necessity. To give a single example of an animal remedy current in Labrador and in somewhat altered form in Indiana and Illinois. "Three lice taken in jelly nine days running, or put on buttered bread, will cure the yellow jaundice." (6, p. 69.) In the introduction of Jühling's work (51) it is stated that whereas in the accepted pharmacopœia of Germany at present only 13 remedies of animal origin are mentioned, even as lately as the time of the Thirty Years' War the "*Dresden Pharmacopœa*" contained 190. Newell says in the introduction to Mrs. Bergen's work (6, p. 6) "Michael Ettmüller, in his "*Opera Medica*" (1708), devoted nine folio pages to medical preparations from the human body and its excreta, of which those obtained from hair, nails, sweat and ear wax are the least filthy." When we find many absurd animal remedies used by the medical profession even as late as the middle of the eighteenth century it is not so surprising to find them used to-day among the unenlightened populace who as a rule must depend on household remedies. A comparative study of ancient and modern scientific medicine shows that as the science advances the number of efficacious remedies from both plant and animal world decreases rather than increases and that many remedies found the beginning of their use in superstition.

Perhaps as good an example as can be given of the survival in the midst of civilization of almost all features of primitive medicine is to be had in the old book "*The Long Hidden Friend*" (43) recently re-published in the *Journal of American Folk-lore* (1904). This strange book was published by John G. Hohmann in 1819 and has been ever since used among the Pennsylvania Germans of eastern Pennsylvania by what are known as "hex-doctors" (*hexe* a witch) whose business it is to overcome the spells of witches on man and beast. The book contains charms, incantations, prayers, and symbols and its extensive use throughout whole communities and almost counties is sufficient witness that the days of witchcraft are by no means gone even in our civilized communities.

Abbott finds that the evil eye is still feared in West England (1, p. 139); that in Macedonia "sorcery is expressly recognized by the Greek church as one of Satan's weapons, to be fought against by Christian means" (p. 143). As both the

Russian and Macedonian peasants considered disease the influence of evil spirits their treatment is "by purification with fire and water, and so the popular practice of physic is founded on a theory of fumigations, washings, and sprinklings attended by exorcisms of various kinds" (p. 223). Both Macedonians and Turks use as a remedy for diseases caused by "Spirits of the Air," for which they believe physicians can do nothing, verses from the Koran sewed up in leather (*Nuska*). "This prescription is either worn around the neck as a phylactery, or is burned and the patient is fumigated with the smoke thereof, or still better, it is washed in a bowl of water which is afterwards drunk by the patient" (p. 224). So, too, passages from the Bible written on the patient's neck or cheek, or water in which a leaf from the Bible has been soaked answer for exorcism.

The frequent appearance in systematic treatises on folk-medicine of prayers and spells Abbott considers strong evidence of the firm conviction that physical ailments are due to non-physical causes. Such a systematic treatise he found in MS. form among the Greeks of Macedonia. It is nameless, dateless, and incomplete, but appears to be the work of an eighteenth century scribe. It is in many ways comparable to "*The Long Hidden Friend*" of which we spoke above. Our authority (1, p. 240) says of it: "This extraordinary document—in tone and style so like parts of the Litany—affords a good illustration of the compromise by which Christianity has adopted pagan belief too firmly rooted to be swept away." What he says of this is true of all other traditional formulæ current in Christian countries. Christian names of Deity, saints, apostles, etc., are substituted for heathen deities and heroes, but otherwise the formulæ are identical. It is beyond the limits of this study to trace further the medical superstitions of this class current throughout the civilized world, and certainly what we have given is sufficiently extensive and representative to convince one of their prevalence. We have here simply an illustration of the fact that the evolution of man's ideas regarding the mysterious and unknown does not keep pace with his development along other lines. It is evidence also of the tenacity of those ideas which have to do with his physical and spiritual well being.

Present Day Cults. Christian Science, Dowieism, and the various schools of mental and "divine" healing have been so thoroughly and ably discussed by Goddard (38) and others that it seems unnecessary to add any detailed treatment of them to this already lengthy discussion. While the writer has made a careful study of these systems his aim so far as they are particularly concerned has been rather to confirm the con-

clusions of his predecessor in this field, and, giving him due credit, to use his conclusions in so far as they fit into a general and extensive study of the miraculous. Goddard has well shown the limits and possibilities of such systems; their relation to hypnotism; their dependence on the common principle of suggestion; and the irrelevancy of any of their distinctive features as the essential elements in their success, since all succeed about equally and in about the same fields. In other than a scientific age some of their accomplishments would be regarded as truly miraculous. They serve to attract that type of mind that does not easily give over a belief in the supernatural. They arose as a protest against a too materialistic conception of medicine and as a substitute for the cruder views supplanted by science. They mark a tendency of the day to evaluate more highly the mental element in man, a thing which psychology in a very different way is aiming to accomplish. Far from being discouraged by the fact that modern psychology has been unable as yet to make such peculiar movements impossible the psychologist should welcome their existence as furnishing a field for the study of religious, social and individual psychology unparalleled in the richness of its offers. This field is full of challenges to our science presenting as it does numerous unsolved problems in the nature of mind and its dependence upon physical, social, religious, moral, and spiritual influences.

The recent Emmanuel Movement is worthy of note in this connection because it has called renewed attention to the fact, and possibly the necessity, of a union of religious and spiritual with psychological and medical methods of treatment of disease. Our study of primitive medicine shows clearly a large religious element in all methods. The success of Christian Science, Dowieism, and kindred movements bears witness to the effectiveness of the appeal to the religious emotion made to centre about an organization and a place of meeting. The failure of some cults which make use of the religious appeal and the success of others with the same cases make plain the fact that not the same type of appeal is effective with all minds. As in primitive times, so now, while the underlying principle may be the same the outward manifestations vary greatly for different types of mind.

The Emmanuel Movement in its incipiency gave promise of being a happier and saner combination of medical, psychological, social, and spiritual methods than any that has yet appeared. In limiting its field of operation to that of functional nervous diseases it accepted the findings of science. It is to be hoped that maturer thought will rescue the movement from a too critical attitude toward medical science (91, p. 5, p. 52) to a legitimate and worthy endeavor to combine that which is

best in science with that which is best in religion in an attempt to alleviate the sufferings of humanity.

The whole tendency of our study is to emphasize the view of modern psychology that the human personality is a unit—physical and mental—and that in the treatment of disease one may perhaps no more neglect the social, moral, and religious nature of the patient than he may the physical. Such a suggestion has tremendous significance for the psychologist, the physician, the social worker, and the religious leader.

To consider it from the point of view of the physician alone it seems to urge, in addition to the appeal which the profession has already made to the psychologist and the social worker, the necessity of a closer association with the religious worker. The freakish, foolish, unnecessary views of many modern cults would gain less currency if a better understanding and a closer co-operation could be established between the workers in the fields suggested.

PSYCHOLOGICAL INTERPRETATIONS

As in primitive, so in modern healing systems, the healer is the centre of much of our psychological interest. One must attempt to realize in oneself the consciousness of both healer and patient as well as to retain at the same time the critical attitude of the observer, a task which it is needless to say is not easy.

The healer has always been necessary. Even the skilled physician hesitates to attempt to heal himself. His brother physician may use the same means, but they will be more effectual than if self-administered. In this appears the social nature of man and his dependence upon his fellows as well as upon higher powers. From our study of the medicine-man it is evident that if he is not already to some degree pathological (which may in this case mean super-sensitive mentally) he makes use of various means which tend to bring about an approximation, at least, to a psychopathic condition in which, because of his training and belief, by hallucinations, dreams and the like he feels his miraculous endowment come upon him. In each case of treatment he undertakes, somewhat the same procedure must be gone through before he is ready to attempt the cure. Two reasons for such procedure seem evident. The subjective one that thereby the confidence of the medicine-man in his own abilities is increased, for in this semi-pathological condition there is an exhilarating mental activity accompanied by a lessened physical feeling of limitation which he interprets as the indwelling of divine prerogatives which he may use. In the second place his actions and appearance in the meantime become so changed that the patient believes him to be what he

claims and gives his unbounded confidence—the chief element of success. The fact that his assumptions may be unfounded in no way affects his success so long as he secures the confidence of his patient and can make his suggestions effectual.

Making due allowance for changes which science, civilization, and higher types of religious thought have made, the successful healer, be he scientific physician, Christian Scientist, mental healer or what not, makes use of the same principles. Many medical men have been too slow to recognize the fact that the helpful suggestions radiating from a strong, hopeful, stimulating personality are many times a more important factor in the treatment of disease than are any of the medicines science has devised for their use. Consciously or unconsciously the successful healer of whatever school is a practical psychologist. A type of personality, with which by no means every one is endowed, is the prerequisite of success with functional nervous diseases especially.

A study of the personalities of the numerous healers who have succeeded notably under various systems reveals the following general facts. Such individuals are frequently found to have been in childhood nervous, excitable, hysterical, dreamers of dreams, seers of visions, subject to auditory and visual hallucinations. They are frequently persons who have had very precocious religious experiences; they have often little education; many are moody, self-centred, exclusive, solitary, meditative, and introspective. In adolescence and later life many have shown unusual interest in the phenomena of mesmerism, spiritualism, hypnotism, or other isms current in their day. In short they are personalities super-sensitive to mental influences both subjective and external, and for this reason they are able to influence strongly other minds possessing in the same or less degree the same characteristics. In short, all things combined to develop a personality that could make effectual suggestions favorable to mental and physical wellbeing. Barring the abnormalities and onesidedness of such persons, the physician should possess many of their mental traits.

There seems to us to be no doubt that the cures effected in primitive times by primitive means were in reality effected through the operation of the law of suggestion upon the mind of the patient. No fair-minded person acquainted with the facts can deny that cures could and must have been made by all the means enumerated in this study. Such results from such diverse and contradictory methods can only be made intelligible by an interpretation of them as the effect of mind, directed by suggestion, upon the body. Since spiritual agencies were for ages the sole discoverable cause of disease, the cures made under such a regimen could be only mind cures, barring

the occasional almost accidental use of real hygienic measures. We believe we have shown that the same was essentially true in the earlier civilizations of Egypt, Chaldea, Babylon, and Greece. The healing miracles of the Bible, excepting perhaps the raising of the dead, may easily fall under the head of mental healing brought about by an intense religious faith in the healer. In so far as cures have been made by saints, their relics, shrines, and the like; by the kings of France and England; by wonder working springs and wells; by many medical cure-alls and by other non-medical means familiar to all, the credit falls chiefly if not wholly to the effect of the patient's own mind upon his body according to the law of suggestion. Modern healing cults can do no more, except as they recognize the necessity of combining the use of this age-long method with rational hygienic and medical means. If we leave out of account all hygienic and medical means, the method of the shaman in so far as its operation upon the mind of the patient is concerned is as little different from that of the "divine" healer of to-day as that of the latter is from the method of the Christian Science healer.

The decided limitations to the cure of disease by suggestion alone seems to be no longer in doubt. On the other hand the medical science that is based solely upon the physiological action of medicines, if there ever was such a medical science, seems to be almost equally limited, as has been shown by writers both within and without the profession (85) and by the history of the science itself.

The leaders of thought and practice in the medical profession have long known and acknowledged the limits of their science. They have not been ignorant of the fact of the large mental element in the cause and cure of disease. The placing of hypnotic and suggestive therapeutics upon a scientific basis has been almost if not wholly the work of practical physicians. It is not by accident that the foremost authority in psychiatry—Kraepelin—combines in one person the best of training in psychological theory with a thorough knowledge of and practice in medicine, or that the French investigators who seem to be well on the way to the discovery of the real relation of the mind to the body combine in rare proportions these same qualifications. So, too, the minister who would follow in the footsteps of Dr. Worcester must have, as he has, a thorough grounding in psychology as well as practical theological and religious training. No merely formal theology, no smattering of popularized psychology will suffice to make him successful or keep him from fatal errors.

There can be little doubt that the failure of the rank and file of the medical profession to live fully up to their oppor-

tunities in the field of psychotherapeutics is in part accountable for the rise and spread of a type of healing cult which reflects little credit upon the intelligence of our people, but which has been a natural result of a new evaluation of the mental element in man brought about largely by the popularization of psychological thought. The church has been equally negligent of her duty as a moral and spiritual force working in harmony and in co-operation with the physician for all-round health. We desire to make the strongest possible appeal for a closer and more sympathetic relation between the sciences of medicine and psychology, and the practical, social, and spiritual forces of the church, each deferring to the other in its distinctive field, but all working together with mutual understanding to the common end of physical, moral, and spiritual health. Only in some such utopian scheme can superstition be uprooted, religion purified and restored to its own, the science of medicine kept from becoming too materialistic and so powerless in some cases and to a degree crippled in all; only by some such plan can the science of psychology be rescued from the danger of too much theorizing and put to work as the practical handmaid of all the other sciences of man.

CONCLUSIONS

At the risk of apparent dogmatism it seems necessary to state in a few brief sentences some of the conclusions which we believe this study warrants. In doing so some repetition will no doubt occur and some conclusions may be stated in positive form for the first time, it having been our purpose in part to present sufficient illustrations to make clear the conclusions now stated.

We believe that there have been and are miracle workers in every age, under the most diverse conditions of civilization and savagery, among all races and under every form of religion.

Almost all miracle workers and believers in miracles have attached religious significance to the wonders they have been able to perform because, being unable to explain the phenomena, they have attributed them to the activity of such supernatural agencies as they believed to exist.

By such wonders men have always been led to a contemplation of the mysterious and through such contemplation have been led to formulate many of their religious notions.

The rapid advance of physical sciences in recent years has rendered less and less prevalent the crude and often extremely irrational explanations of miracles common to primitive and even to civilized man. The advance of scientific psychology and scientific psychotherapy has done still more to rationalize our views by demonstrating the possibility of explaining sup-

posedly supernatural happenings on the basis of laws of physical and mental activity.

In spite of this fact, and because so much is still unknown especially in the field of mind, the belief in the supernatural still persists. This we believe to be due to the age-long tendency of the human mind to so react and to the inherent limitation and necessary finiteness of the human mind. It is possible that at least for ages yet religion without the supernatural will be for the masses an impossibility.

The field of the miraculous will always be a most hopeful and interesting field for science for it is always to be found just along the periphery of the field of science. New problems are always presented as old ones are solved.

Among the wonders of all peoples, miracles of healing have always held a pre-eminent place because of the close personal interest in the results and because problems in this field are more difficult and baffling than in any other.

It is now certain that those cures which have always seemed miraculous are the cures effected in large measure by the influence of the mind on the body. They have seemed miraculous because the laws under which they were effected were not understood.

It is now a well established fact that the cures of this nature are brought about in accordance with the law that the mind tends to translate into physical reaction any suggestion or idea which can be actively aroused and kept at the focus of attention. That this may be done the idea must seem reasonable and possible, and inhibiting and opposing ideas must be banished. In short, the mind must be made to give the idea free play.

It seems axiomatic that any system will succeed which can make this law operative for suggestions of physical, mental, and moral well-being. The ways in which this may be done vary as individuals always have and always will vary. In spite of the fact that all systems depend upon suggestion in some form as the means of making cures, it by no means follows that any one uniform or scientific system will be able to make suggestion effectual in all cases. We shall probably continue to have various mental healing cults so long as men think differently in the fields of philosophy or religion.

We may safely look for saner and more scientific views on the subject of mental healing but present tendencies indicate that we need not expect that the religious elements of faith in the efficacy of prayer, belief in the supernatural, and other deeply rooted instincts can or will be neglected as a means of making suggestions effectual. The appeal is not wholly nor chiefly to the mind acting in its most rational way but to those deeper, more fundamental activities, rooted in instincts, habits,

hereditary tendencies and the like, which are more far reaching in effect than anything in the rational activity of the individual mind.

We are forcibly impressed with the necessity of further careful and accurate study of the operation of the law of suggestion. We need far more data upon the conditions favoring and hindering the operation of the law. We have had much theorizing but as yet too little scientific study and experimentation in this promising field.

We are convinced that churchmen, physicians, and psychologists have all conceived of their functions and relations too narrowly and that they need to co-operate for mutual understanding and profit.

Finally, we believe that rightly conceived the laws of mental healing have a significance as hygienic measures equal to their usefulness as means of cure and that they are therefore of moral, spiritual, and pedagogical value as a means of establishing correct habits and activities in these fields.

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